



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------------------------------------|-------------|----------------------|----------------------|------------------|
| 10/723,656 | 11/26/2003 | Jose M. Sosa | API-1017-US(COS-919) | 8871 |
| 25264 | 7590 | 04/18/2005 | EXAMINER | |
| FINA TECHNOLOGY INC PO BOX 674412 HOUSTON, TX 77267-4412 | | | ASINOVSKY, OLGA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1711 | |
| DATE MAILED: 04/18/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,656

Applicant(s)

SOSA ET AL.

Examiner

Olga Asinovsky

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-14,16-29 and 31-36 is/are rejected.
- 7) ☒ Claim(s) 3,15 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/04/2005.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-14, 16-29 and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krupinski et al U.S. Patent 6,433,092 or Krupinski et al U.S. Patent 6,166,099, or Krupinski et al U.S. Patent 6,274,641, or Krupinski et al U.S. Patent 6,420,444 (cited by applicants), or Krupinski et al U.S. Patent 6,608,141.

3. References have been discussed in the office action mailed on 12/08/2004.

All claims are original.

4. Applicant's arguments filed March 04, 2005 have been fully considered but they are not persuasive. The argument is that none reference to Krupinski discloses the ratio of gel% to rubber% (G/R) increasing as the swell index increases.

5. During the interview Dr. Sosa discloses that the key of the invention is to use a multifunctional peroxide initiator to control the gel and swell index. The swell index should be as higher as possible that can be obtained by a rubber having high gel value.

6. The rubber having a high gel value is a benefit to control the elasticity of a HIPS.

Art Unit: 1711

The present independent claims 1, 13 and 26 are open to any content of a multifunctional peroxide initiator. The process conditions in any Krupinski invention are readable in the present independent claims. Each patent to Krupinski discloses HIPS produced in the presence of a multifunctional peroxide initiator. The multifunctional peroxide initiator is readable in each Krupinski for the present claims 5, 17 and 32. The polydispersity index of 2.66 to 3.97 is readable in applicants' claims 12, 21 and 28. The melt flow rate could be 2.07; that is within the range specified in the present claim 2, 14 and 29. The examiner agrees that Krupinski does not disclose a rubber having a high gel value to control the elasticity of the resulting HIPS polymer. However, it would have been obvious to one of ordinary skill in the art to consider that the analogous process for producing a HIPS in each Krupinski invention can produce a high gel value of a rubber and, thereby high swell index, because reference discloses controlling process conditions by the temperature, residence time and the amount of a tetrafunctional peroxide initiator. Regarding the similarity of properties of the HIPS in Krupinski, it is reasonable to presume that a rubber can have a high gel index.

Allowable Subject Matter

7. Claims 3, 15 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

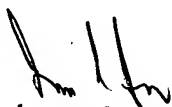
Art Unit: 1711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Olga Asinovsky
Examiner
Art Unit 1711

O.A.

April 13, 2005


James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700